

Message

From: Ryan, Shawn [Ryan.Shawn@epa.gov]
Sent: 3/20/2023 2:51:12 PM
To: Dipolt, Kelly [Dipolt.Kelly@epa.gov]; Gullett, Brian [Gullett.Brian@epa.gov]; Devito, Michael (he/him/his) [Devito.Michael@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; Burton, Terry [Burton.Terry@epa.gov]
CC: Harrill, Alison [Harrill.Alison@epa.gov]
Subject: RE: [External] Really need your input here if possible.....FW: Sample Results for Agricultural Review
Attachments: 1-s2.0-S0045653509009552-main.pdf; 1-s2.0-S0048969713008462-main.pdf

Here are the two articles mentioned.

Shawn

Shawn P. Ryan, Ph.D.
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109 T.W. Alexander Dr., Research Triangle Park, NC 27711
Office 919-541-0699 Mob: Ex. 6 Personal Privacy (PP)

From: Dipolt, Kelly <Dipolt.Kelly@epa.gov>
Sent: Monday, March 20, 2023 10:44 AM
To: Gullett, Brian <Gullett.Brian@epa.gov>; Devito, Michael (he/him/his) <Devito.Michael@epa.gov>; Lemieux, Paul <Lemieux.Paul@epa.gov>; Burton, Terry <Burton.Terry@epa.gov>
Cc: Harrill, Alison <Harrill.Alison@epa.gov>; Ryan, Shawn <Ryan.Shawn@epa.gov>
Subject: FW: [External] Really need your input here if possible.....FW: Sample Results for Agricultural Review

See below

From: Durno, Mark <durno.mark@epa.gov>
Sent: Monday, March 20, 2023 10:41 AM
To: Dipolt, Kelly <Dipolt.Kelly@epa.gov>
Subject: FW: [External] Really need your input here if possible.....FW: Sample Results for Agricultural Review

Kelly,

Here is the dioxin reference for background soils – we feel good about this but would love ORD's input. SVOCs to follow.

Mark

Mark Durno
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440-250-1743

From: Markiewicz, Karl (ATSDR/OAD/OCHHA) <kvm4@cdc.gov>
Sent: Monday, March 20, 2023 9:55 AM
To: Durno, Mark <durno.mark@epa.gov>

Cc: Kelly, Jack (R3 Phila.) <Kelly.Jack@epa.gov>; juvmille@pa.gov; gfu6@cdc.gov

Subject: Re: [External] Really need your input here if possible.....FW: Sample Results for Agricultural Review

Hello Mark,

It's the Lorber et al 2009 publication that is frequently cited. I feel we should provide background range bc I feel this area is not truly rural (compared to GNP in Montana) and is in close proximity to populations, highways, industry, residential wood stoves, ...

Lorber, Matthew & Patterson, Donald & Huwe, Janice & Kahn, Henry. (2009). Evaluation of background exposures of Americans to dioxin-like compounds in the 1990s and the 2000s. *Chemosphere*. 77. 640-51. 10.1016/j.chemosphere.2009.08.016.

Here's a more recent publication - specifically Table 3. Urban et al. 2014. A review of background dioxin concentrations in urban/suburban and rural soils across the United States: Implications for site assessments and the establishment of soil cleanup levels

The data available for rural soils were generally more robust than for urban/suburban soils. Not surprisingly, background levels of DLCs in urban/suburban soils were higher and more variable than in rural soils: 0.1–186 vs. 0.1–22.9 ng/kg TEQ, respectively

J.D. Urban et al. / Science of the Total Environment 466–467 (2014) 586–597

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Table 3
Background concentrations of DLCs in rural soils.

Source	Source data available for TEQ calculation/recalculation?	TEF	Imputed value for non-detect	Mean TEQ (ng/kg)	Median TEQ (ng/kg)	Minimum TEQ (ng/kg)	Maximum TEQ (ng/kg)
TCEQ Texas Soil Survey (TCEQ, 1997)*	YES	2006 WHO	Full MPC	7.1	4.1	0.8	22.6
Connecticut State Survey (MRI, 1992)	NO	1998 WHO	Zero	5.7	NR	NR	NR
Elk River, Minnesota Survey (Reed et al., 1990)	NO	2006 WHO	Zero	3.9	3.8	0.6	7.6
Mississippi Rural survey (Fiedler et al., 1995; Rappe et al., 1997)*	YES	2006 WHO	NR	3.1	0.8	0.1	22.9
TCEQ Texas Soil Survey (TCEQ, 1995a,b)*	YES	2006 WHO	Full MPC	2.9	2.3	0.8	8.0
Maine soil survey (Tewhey Associates, 1997)	NO	1998 WHO	Zero	2.9	NR	NR	NR
Washington State Department of Ecology study (WDE, 2010)*	YES	2006 WHO	DL/2	2.5	1.9	0.7	6.6
Denver, Colorado Urban and Rural Background Soil Survey (USEPA, 2002)*	YES	2006 WHO	DL/2	2.2	1.1	0.1	20.2
USEPA Midwest Soil Screening Survey (USEPA, 1985)*	YES	2006 WHO	Full DL	TCDD-only: 2 All congeners: 2.2	TCDD-only: 2 All congeners: 2.1	TCDD-only: 1 All congeners: 1.3	TCDD-only: 3 All congeners: 3.2
USEPA National Rural Background Dioxin Soil Sample Survey (USEPA, 2007)*	YES	2006 WHO	RL/2	2.0	1.0	0.2	11.8
Washington State Department of Ecology study (WDE, 2011a)	YES	2006 WHO	DL/2	1.7	0.6	0.1	9.4
USEPA Columbus, Ohio (USEPA, 1996)	YES	2006 WHO	DL/2	1.3	1.2	1.0	1.8
Midwest and Ontario Soil Survey (Birmingham, 1990)	NO	1989 USEPA	DL/2	0.4	0.2	0.2	2.2
Hawaii Soil Dioxin Contamination Report (HDOH, 2011)	NO	2006 WHO	NR	NR	NR	0.9	27.0

MPC = maximum possible concentration.

DL = detection limit.

RL = reporting limit.

NR = not reported.

* Updated TEQ concentrations were derived for this paper using WHO₂₀₀₆ TEFs.